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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,041	04/15/2004	Kenji Yamamoto	5000-5169	9442
27123	7590	10/24/2006	EXAMINER	
MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101			ESTREMSKY, SHERRY LYNN	
			ART UNIT	PAPER NUMBER
			3681	

DATE MAILED: 10/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/826,041

Applicant(s)

YAMAMOTO, KENJI

Examiner

Sherry L. Estremsky

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-5,7 and 8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,7 and 8 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, see the second paragraph of page 5 of the amendment dated September 28, 2006, with respect to the rejection(s) of claim(s) 1, 3-5, 7, and 8 under 35 U.S.C. § 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3, 4, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rovinsky, U. S. Patent 4,467,230 in view of Bell, U. S. Patent 6,883,235.

Rovinsky shows in figure 1 a differential apparatus for transmitting torque from an output shaft 40a of a driving source 12 to two axle shafts 28 and 30 while producing a rotational difference between the two axle shafts (column 4, lines 22-40).

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A differential case 40a is coaxially and integrally joined with the output shaft 40a, wherein the output shaft and the differential case form a single monolithic member.

(claim 1)

The driving source is a motor 12.

(claim 3)

The differential apparatus is arranged between the two axle shafts 28 and 30 for rotating the two axle shafts at different speeds or at the same speed.

Differential gears 44, 46, and 48 connect the two axle shafts to each other.

Output shaft member 40a has a differential case portion (the interior portion) for accommodating the differential gears and an output shaft portion (the exterior portion) integrally formed with the differential case portion from the same material, wherein the output shaft member is a single monolithic member.

A driving source 12 supplies the output shaft member with torque.

(claim 4)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Rovinsky to make the monolithic member a cast iron member in view of Bell because such construction results in a relatively light weight structure (Bell, col. 1, lines 18-38).

4. Claims 1, 3, 4, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otake, U. S. Patent 5,469,032 in view of Bell.

Otake shows in figure 1 a differential apparatus for transmitting torque from an output shaft 136 of a driving source 11a to two axle shafts 134 (see column 2, lines 66-67, describing

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that symmetrical pairs are explained with reference to only one part of the pair) while producing a rotational difference between the two axle shafts.

A differential case 135a is coaxially and integrally joined with the output shaft 136, wherein the output shaft and the differential case form a single monolithic member (column 3, lines 24 and 32-36).

(claim 1)

The driving source is a motor 11a.

(claim 3)

The differential apparatus is arranged between the two axle shafts 134 for rotating the two axle shafts at different speeds or at the same speed.

Differential gears 133 connect the two axle shafts to each other.

Output shaft member 135a/136 has a differential case portion 135a for accommodating the differential gears and an output shaft portion 136 integrally formed with the differential case portion from the same material, wherein the output shaft member is a single monolithic member.

A driving source 11a supplies the output shaft member with torque.

(claim 4)

The two axle shafts are linked to two drive wheels of an industrial vehicle, respectively (column 4, lines 2-10).

(claim 8)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Rovinsky to make the monolithic member a cast iron member in view of Bell because such construction results in a relatively light weight structure (Bell, col. 1, lines 18-38).

*Allowable Subject Matter*

5. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U. S. Patent 5,372,213 (Hasebe et al.) December 1994 - discloses a differential apparatus with a differential case extended to form a motor output shaft as a monolithic member.

U. S. Patent 5,396,968 (Hasebe et al.) March 1995 - discloses a differential apparatus similar to that of Otake.

U. S. Patent Application Publication 2002/0165060 (Fleytman et al.) discloses a differential apparatus with a casing extended to form a shaft for receiving input from a power source.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sherry L. Estremsky whose telephone number is (571) 272-7090. The examiner can normally be reached on Tuesday and Friday from 7:30 a.m. to 6:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor can be reached on (571) 272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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SHERRY ESTREMSKY  
PRIMARY EXAMINER  
AU3681 10-20-06